

Notice of Allowability

Application No.

10/716,372

Examiner

David A Reifsnyder

Applicant(s)

ARNAUD, JOHNNY

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed on 3/15/04 and Examiner Initiated Interview of 6/17/04.
2. ☒ The allowed claim(s) is/are 24-26, 34-36 and 38-52 (renumbered claims 1-3,9-11,4-8, and 12-21, respectively).
3. ☒ The drawings filed on 14 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11/03 and 3/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 6/18/04.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment, except for updating of the continuing data in the specification, was given in a telephone interview with Gregg A. Duffey on June 17, 2004. Discussed how claim 44 can not depend from canceled claim 36, and agreed to depend claim 44 from claim 36 by Examiner's Amendment.

In The Specification

The first paragraph on page 2 has been replaced with the following amended paragraph:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a divisional application of co-pending application Serial No.09/879,496, originally entitled Method and Apparatus for Mixing Fluids, Separating Fluids, and Separating solids from Fluids" which is hereby incorporated by reference herein in its entirety, now U.S. Pat. No. 6,669,843, issued December 30, 2003, entitled

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Apparatus for Mixing Fluids" by Johnny Arnaud, also incorporated by reference herein in its entirety.

In The Claims

44. (amended) The fluid mixer of claim ~~37~~ 36 further comprising a second fluid inlet in fluid communication with the orifice ring.

REASONS FOR ALLOWANCE

The main reason for the allowance of claims 24-26 and 38-42 is the instantly claimed fluid mixer to saturate liquids with gases comprising: a cylindrical donut housing having a fluid inlet; a ring having a plurality of grooves, the ring being concentric to the cylindrical donut housing, the ring having an outer diameter on a first end that is smaller than a diameter of the cylindrical donut housing, thus defining a distribution channel; a cylinder concentric with the ring and surrounded by the ring, the cylinder in fluid communication with the distribution channel via the grooves, the cylinder having a gas inlet to receive gas and a liquid outlet to discharge liquids; a porous gas diffuser disposed within the cylinder, the diffuser connected to a gas inlet; and a gas outlet for releasing excess gas.

The main reason for the allowance of claims 34-36, 43 and 44 is the instantly claimed fluid mixer to mix multiple fluids comprising: an upper donut housing with a first fluid inlet; a ring having a plurality of grooves, the ring being concentric to the upper donut housing, the ring having an outer diameter on a first end that is smaller than a

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diameter of the donut housing thus defining a distribution channel; an orifice ring adapted to inject a second liquid into the first liquid leaving the grooves; and a cylinder concentric with the ring and surrounded by the ring, the cylinder in fluid communication with the distribution channel via the grooves, a liquid outlet being located at a bottom of the cylinder.

The main reason for the allowance of claims 45-52 is the instantly claimed fluid mixer, comprising: a cylindrical donut housing having a first fluid inlet, a ring having a plurality of grooves, the ring being concentric to the cylindrical donut housing, the ring having an outer diameter on a first end that is smaller than a diameter of the cylindrical donut housing, thus defining a distribution channel; and a cylinder concentric with the ring and surrounded by the ring, the cylinder in fluid communication with the distribution channel via the grooves; a device to inject a second fluid into the mixer for mixing with the first fluid; and a liquid outlet to discharge liquids.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art

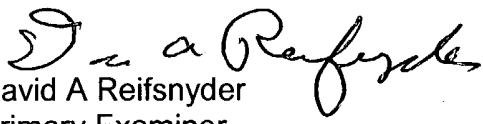
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Franklin Jr. who discloses a fluid mixing apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Reifsnyder whose telephone number is (571) 271-1145. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda M Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David A Reifsnyder
Primary Examiner
Art Unit 1723

DAR